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ABSTRACT

Promotion of economic literacy of teachers and students is a critical need in economic education. Graduate and undergraduate programs in economic education described in this paper represent significant steps toward the goal of having social studies teachers well-prepared in economics and the teaching of it. Some centers and Councils on Economic Education are developing programs which appear to be more innovative and exciting than those typical of the past. However, barriers between the departments of economics and education must be broken down, and economics programs for preservice or inservice teachers must include evaluation and, if possible, experimental research. (VLW)

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PRE-SERVICE, IN-SERVICE, AND GRADUATE PROGRAMS IN ECONOMIC EDUCATION

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Introduction

Although the need for economic education has been fairly well established, those who are unfamiliar with the aims and purposes of the economic education movement, and perhaps even some of us who have been laboring in these vineyards for many years, must be reminded of the magnitude of the problem that exists. When he was president of the New York Stock Exchange, Keith Funston remarked: "The American economy is the eighth wonder of the world; the ninth wonder is the economic ignorance of the American people." And Luther Hodges, former Secretary of Commerce, once wrote: "If ignorance paid dividends, most Americans could make a fortune out of what they don't know about ecpnomics." [1] There is a distressing abundance of statistical data to support these "gut" reactions.

A few samples should suffice. A test developed by Dr. David J. Schwartz of Georgia State University was administered to over 21,000 high school students in Georgia and Kansas. The knowledge being tested was considered to be essential for the average consumer in our society, but only one student in 900 achieved a score of 90 percent correct or better, and mean scores as low as 11.32 were obtained in some schools.[2] The well-known Test of Economic Understanding published by Science Research Associates for high school use was administered to a national sample of several thousand high school students in the process of obtaining norming data. The majority of

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students who had not had an economics course were unable to tell how inflation affects various groups, such as pensioners and debtors. In a study initiated in 1969, the NYU Center for Economic Education and the New York City Council on Economic Education tested several hundred students in junior colleges. Prior to taking a one-semester economics course, 70 percent of those students were unable to distinguish between characteristics of free enterprise and communism. According to the AEA's National Task Force on Economic Education, "Economic understanding is essential if we are to meet our responsibilities as citizens and as participants in a basically private enterprise economy." [3]

If we accept this, then it follows that economics must be taught at the pre-college level. And, if economics must be taught in the schools, then we must prepare teachers to do the job. The probability that persons with degrees in economics will enter the teaching profession at the pre-college level is remote. The best that we can hope for, then, is that teacher-trainees or teachers in service will receive enough economics training to enable them to instruct their students in this subject. No one knows exactly how much training is necessary for this purpose. Once, most college economists who were questioned on this point would reply that the minimum preparation should be the six-credit introductory principles course. Now it is often said that a teacher should have the equivalent of a minor in economics before attempting to teach the subject in the schools. A much-quoted study made by G. L. Bach and Phillip Saunders lends support to this latter judgment, for their research indicated that one cannot acquire a lasting understanding of basic economic principles with less than 15 credits.[4]

Unfortunately, few teachers in the United States have had this much preparation.

In 1967, the NYU Center for Economic Education made a nation-wide survey of the economic education of teacher-trainees. Of the 713 colleges with teacher-training programs which responded to the questionnaire, 36 percent indicated that they did not require economics of any of their teacher-trainees. At the high school level, the social studies teacher is generally considered to be responsible for teaching economics, either as a separate course or as part of some other course (such as Problems of Democracy). Yet, the NYU study showed that only 50 percent of the social studies education majors were required to take economics (and this requirement could often be met by a single three-credit course), and that where not required to take it, usually no more than 10 percent would do so voluntarily.[5] Very few colleges required more than six credits of economics, and this was invariably the introductory principles course taken at the sophomore level. The Bach-Saunders study suggests that the economics that was learned in that introductory course is lost by the time the teacher gets into the field.

What, then, can be done to remedy this situation? Improvements can be made in the pre-service training of teachers. In-service courses, workshops, and institutes can be provided, and special graduate programs can be established. Some of these programs will be described in this paper.

Pre-Service Programs

Pre-service programs in economics for teacher trainees are rare. A few of the students who have majored in economics or who have earned a substantial number of credits in the subject in business curricula drift into education. This usually means that late in their undergraduate programs they take enough education credits to

qualify for a teaching license in their state or city. Needless to say, few of these education courses specifically address themselves to the teaching of economics. In the NYU survey mentioned above, only seven courses specifically devoted to the teaching of economics were reported. Of those colleges which did require economics of some of their teacher-trainees, 32 percent reported that they provide instruction in methods of teaching economics. Usually, this is little more than a session or two of a general methods course, a course in social studies education, or in methods of teaching business subjects. Indeed, only 19 percent reported that they provide some instruction in methods of teaching economics to their social studies majors. Of course, there are many who believe that if one knows one's subject one can teach it. This is simply not true. A popular newspaper columnist wrote a few years ago "... economists sometimes seem like the last men who should explain economics."[6] This may be a bit extreme, but an examination of hundreds of evaluations of in-service economics courses, institutes, and workshops written by participating teachers, reveals that it is not enough simply to teach them economics. A typical comment found in these reports is: "Now I understand bank credit expansion, the law of comparative advantage, elasticity, and the like, but I still don't know how to pass it on to the kids in my classes."

One problem, of course, is that economics must compete with other subjects. The social studies teacher must be prepared to teach history, government, geography, and possibly even sociology and anthropology. The overwhelming majority concentrates upon history. How much economics can be required of the social studies teacher trainee, then, without neglecting some other essential subject? Let us examine the

program for social studies education majors at New York University's School of Education.

A few years ago, NYU's Department of Social Studies Education provided most of the content courses needed for teacher certification. That is to say, it offered history, government, geography, economics, and the like. While these courses tended to duplicate, or at least to overlap, courses offered at the University's liberal arts school (Washington Square College) they were justified on the grounds that there were advantages to having classes made up entirely of education students. The instructors were invariably professors who had been trained in both the subjects they were teaching and in education. Often, these instructors were individuals who had taught in high schools before obtaining their doctorates. Thus, it was felt that they were competent to teach history, geography, or whatever, and could do so with an eye to the secondary school curriculum. Granted that economics is economics, and that the coefficient of elasticity is the same for education majors as for anybody else, there was still something to be gained by having these concepts taught by someone who knew how these topics entered into the high school curriculum and how they could be taught to pre-college students.

Typically, the student entering the social studies education program at NYU would get the following preparation in economics.

- First, the student would take an interdisciplinary social studies course which included some elementary economics. Incoming freshmen were nearly always put into this course. They were introduced to the scientific method as it applies to the social sciences, taught the

elements of scholarly research, and trained in the use of footnotes, quotation marks, and other such professional paraphernalia. The first third of the course was devoted to a study of problems involving public opinion. Each student was required to select a topic for study, such as: "Should there be stronger Federal controls over lobbyists?" Any of the disciplines that applied to this problem would be brought to bear whenever appropriate. The next third of the course focused on problems involving government's relations with labor. The student would select a problem such as: "Should public employees have the right to strike?" Although labor history was briefly covered, and important labor legislation examined, theoretical economics was held to a minimum. Some attention might be paid to wage theories, supply and demand as applied to the labor market, the economic effects of strikes, and so on; but never were the students treated to such delights as the "nonlinear relationship between wages and unemployment rates below frictional values at the sectorial level."[7] The last part of the course dealt with government's relationships with business. The anti-trust laws were stressed, and students often examined problems relating to the effectiveness of the Sherman and Clayton Acts, the FTC, or other regulatory agencies. The economic effects of business concentration would be noted in a general way, but the kinked curve and an analysis of costs, prices and profits in monopoly situations were reserved for the future. Now, it should be

apparent that this course included political science and history as well as economics. The problem-solving approach was employed, and the content of one or the other of these disciplines was injected when that content could help to shed light on the problem.

- Next, the student would take the second semester of the course described above. Here, about half the course would be devoted to international economic problems. (The other half was given over to international political problems.) The student might study problems involving tariffs and trade, or U.S. relations with the Common Market. The law of comparative advantage was always included, but the pleasures of the Marshall-Lerner condition were withheld from these deprived young people. Each of these two courses, entitled simply Social Studies I and Social Studies II, was valued at four credits. About one-half of the total of eight credits, then, was devoted to economics, but economics largely of a descriptive or institutional type.

- A four-credit course entitled Current Economic Problems was the next requirement. Problems currently receiving public attention were stressed and were related to the student's own interests. Consumer economic problems and the securities market were especially popular topics. Inflation, unemployment, poverty, conservation, and population were included. In this course the student received a gentle introduction to analytical principles, but graphic analyses were not made for their own sake -- only if absolutely necessary

to understand a problem. Much of the content of the typical macroeconomics course was included in this offering. The course proved to be extremely popular, it was taken by many students who were not planning to teach social studies or business, and several sections were needed to meet the demand.

- As a sophomore, the social studies major took a four-credit course in economic geography. It is difficult to generalize about this course, for the amount of analytical economics included depended upon the background and interest of the instructor. Some made it into a descriptive or fact-oriented course; others attempted to relate basic principles to the content.

- At some point before reaching his senior year, the social studies major would take a one-semester course in American economic history. Teaching techniques varied. Some instructors took a strictly chronological approach, examining economic events in U. S. history in the colonial period, the early national period, and so on. Some used a topical-chronological approach, dealing with the history of labor, then the history of money and banking, the history of agriculture, the history of America's foreign trade, and the like. Others adhered to the problem-solving philosophy that typified the Department, starting with some current economic problem and tracing its historical development.

- Finally, in his senior year (or perhaps late in his junior year) the

student was required to take a four-credit principles course of a rigorous nature. It will be realized, of course, that many economic principles (particularly those involving macroeconomics) had been included in previous courses. Now the student learned about the theory of the firm, oligopoly prices, cross elasticity, and other topics usually found in the microeconomics course. By this time, his fear of economics had been largely eliminated, and it may be of interest to note that many of the elementary education majors, nurses, and others who had taken the earlier courses as electives had acquired enough of an interest in economics to want to take this final course voluntarily.

All the way through his undergraduate program then, the social studies major was exposed to some economics. Presumably, the subject matter was still fresh in his mind when he entered the school system with his provisional license. Furthermore, he had learned how economics can be related to the problems of the day and to the other subjects in the social studies curriculum. In his social studies methods courses he had been required to develop some lesson plans or a unit on economics. In short, he was probably as well prepared as anyone could be to teach economics in the secondary school without actually obtaining a major or minor in the subject. Unfortunately, no effort was ever made to evaluate this program. Except for some informal feedback from former students, there was no evidence that the students applied what they had learned when they became classroom teachers. No standardized tests were given to ascertain how much economics the students in this program learned as compared with students in the liberal arts college, for example.

Then, around 1963, the program described above had to be modified considerable in accordance with new policies established by the University administration. "All-university" courses were developed in order to end the duplication that had existed. Now there would be one sociology course for all students, one introductory American history course, and so on. The School of Education did manage to have a separate six-credit principles of economics course for its social studies majors and also continued to offer its economic geography course (now six credits) because the latter was not offered elsewhere in the University. The other courses mentioned were terminated. Social studies majors now were plunged into a rigorous traditional principles course in their freshman or sophomore year. It differed from the all-University economics course only in having a homogeneous clientele and in having an instructor who was familiar with the secondary school curriculum and with methods and materials for teaching economics at the pre-college level. Thus, in addition to getting the usual content (macro in the first term; micro in the second); the students were occasionally advised by their instructor of how a concept (say, bank credit expansion) might be taught to high school students and what materials were in existence for pre-college use. The students were given the SRA Test of Economic Understanding on a pre-test, post-test basis and compared with several hundred liberal arts students in colleges throughout the State. The results indicated that although the Education students achieved a slightly lower mean score on the pre-test than the mean achieved for all students tested (n = 1,252), their gain score was 7.25 scaled score points. This was considerably better than the mean score achieved by any other college. Others ranged from 3.85 to 4.76 points.[8]

This is mentioned to dispel any notion that the School of Education's economics course was inferior. (Incidentally, the instructor was not familiar with the contents of the SRA Test, having seen only one or two of the 50 questions.) No study of the lasting effects of the course was made, however, so there is no evidence that the students retained what they had learned by the time they finished college and entered the teaching profession. Few of the undergraduate social studies majors took any other economics courses, except for the required economic geography.

In 1966, an Advisory Seminar to the California State Department of Education recommended that future teachers of secondary social studies and business education received as a minimum a three-course (nine semester hours) economics sequence which would include a "non-traditional Basic course," a course in "Contrasting Economic Systems", and an advanced problems course. The basic course would be supplemented by a "laboratory supplement" in which representatives of the economics and education departments would cooperate in providing instruction in applying economics to pre-college classroom situations.[9] Something like this has been tried in the University of Illinois at Urbana and in the University of Wisconsin at Milwaukee. In Illinois for the past few years a separate section of the economics principles course has been available for education students. An education specialist is brought in during the regular economics class periods to discuss methods and materials of teaching economics to secondary students. Although no formal evaluation has been made, the course director is of the opinion that it has worked well, and tests show that the economics content has not been contaminated or weakened by the inclusion of educational methods. In Wisconsin, the education students get a separate hour-long

session in methods of teaching economics. Ideally, the student takes the education laboratory session along with the principles course, but in practice this has not always worked out that way. Nevertheless, student response to this has been good, according to the course director.

In all three institutions -- NYU, Illinois, and Wisconsin -- the lack of a rigorous formal evaluation constitutes a weakness. There is no way of knowing how well the graduates of these programs performed in their classrooms when they became teachers; thus, the real effectiveness of the programs remains a mystery.

In-Service Programs

The Joint Council on Economic Education estimates that 2,500 teachers participated in summer economic education programs in 1970 alone. Most of the councils on economic education have concentrated their efforts on reaching teachers through workshops, institutes, and special in-service courses. The Arkansas Council, since its inception in 1962, has provided the equivalent of 48 hours of classroom instruction for some 4,000 teachers. Courses offered by the New York City Council are taken by about 100 teachers a year. Some 2,000 teachers have taken courses or workshops offered by the Connecticut Council, and the Minnesota Council has provided 3,000 teachers with the equivalent of a semester of economics

It is difficult to generalize about these programs. Some carry graduate credit; some do not. They vary greatly in length and in content. A fairly common procedure in workshops is to have the participants receive instruction in economics in the morning and instruction in teaching the subject during the afternoon. An instructional team made up of economists and educators is often used.

Some sort of evaluation is usually made of these programs. Teachers are often given the SRA Test of Economic Understanding or the more sophisticated Test of

Understanding in College Economics on a before and after basis. Invariably, the results are positive. There have been few efforts, however, to determine the effect of this training upon the secondary school students. One study, made by Phillip Saunders of Indiana University (formerly of Carnegie-Mellon) showed that teachers receiving special training achieved better results in teaching economics to eighth-graders in the Pittsburgh area than teachers who had not received the training, but who were using the same materials with children of comparable IQ's and reading abilities. The more training the teacher received, the more the pupils learned.[10] Robert Highsmith of the Center for Economic Education at St. Cloud State College in Minnesota is attempting to determine the impact of the Center's in-service courses on the pupils of participating teachers. He is trying to find out if the pupils of teachers who have had the in-service training perform significantly better on the SRA Test than the pupils of a matched group of teachers who have not had such training. Unfortunately, studies of this type are extremely rare.

Usually, teachers participating in the in-service programs are asked to evaluate them by filling out a questionnaire. The results are generally favorable. Outside evaluations are infrequent, however. In 1968 the Joint Council on Economic Education commissioned an evaluation of the economic education movement in Connecticut. The technique used in this evaluation was too complex even to be summarized in this paper, but one part of it involved the sending of questionnaires to several hundred teachers who had participated in in-service programs over the years. Eighty-seven percent gave favorable responses; that is, they found the experience to be "very helpful" or "helpful." Sixty-eight percent reported that they had shared their learnings with other teachers, the number ranging from one to

400. Thus, there is a kind of multiplier effect. Internal evaluations conducted in other states have achieved very similar results, with only minor varia ions in the percentages. When asked how these programs could be improved, however, the leading response by participants is very often that more help is needed in the methods of teaching economics at the pre-college level.

Graduate Programs

The probability of getting truly adequate undergraduate preparation in economics for teacher-trainees is remote. The workshops, institutes, and in-service courses represent valiant attempts on the part of centers and councils to help teachers in the field. Unfortunately, however, a single workshop may be the only formal training a teacher receives in economics, although there are a few who practically make a career out of attending these. Not many have gone on to take formal courses in universities after their workshop experiences (only 10 percent of the educators who have attended Connecticut's workshops, for example). This may be because the teachers lack the pre-requisites to take graduate courses and because they would receive no academic credits for undergraduate work. Thus, there is a need for graduate programs which will give teachers more preparation in economics, enable them to earn graduate credits for work which (in terms of its basic content) is similar to undergraduate work, and earn master's or doctoral degrees in economic education.

Many economics departments are offering introductory or intermediate courses for teachers and giving graduate credit. In some institutions a strong education component is added to the economics offerings, and the school or department of education bears responsibility for the program. During the past three years the University of Minnesota has had 121 teachers complete its Graduate Intermediate Eco-

nomics Program, with the result that 60 school systems now have in-house consultants who have had the equivalent of a major in economics.

The NYU School of Education offers several graduate courses with substantial economic content. "Economic Emphases in American History" is a six-credit offering which is functional to teachers because it helps them to see how economic issues can be included in their high school history courses. A two-semester "Governmental Economics" course deals with government's role in the economy, including such topics as government and business, government and labor, government and agriculture, regulation of the securities markets, the effects of military and defense spending on the economy, consumer protection, conservation, and counter-cyclical policy. Since few of the students have had more than six credits of economics (and that is often many years before), some of the elementary principles are reviewed. Thus, cross elasticity is related to the application of anti-trust policy, the effects of minimum wage legislation on employment are studied, and fiscal and monetary policies are examined in relation to business fluctuations, for example. Finally, there is a three-credit course called "The Economy of the New York Region." This is particularly useful for teachers in the area because one year in New York's social studies curriculum is devoted to a study of the New York area, and most teachers are poorly prepared in the history, government, geography, and economy of their own region. The course on the New York economy covers such problems as housing, welfare and poverty, transportation, the loss of certain industries, and public finance. Each topic lends itself to a considerable amount of economic analysis. The students study the

economic effects of rent control on the housing market, the tax structure (are the major taxes regressive, progressive, or proportional, for instance), rising costs of city government, relative costs and benefits of different transportation facilities, and the like. The students are given many graphs, charts, and tables which, with some simplification, can be used in their own secondary classes.

Doctoral candidates at NYU can concentrate upon economic education, if they so choose. The degree is granted from the Division of Social Studies Education, however. The amount of economics taken in such a program depends upon the student's economics background and upon the other requirements that he must meet. The thesis is done in the area of economic education, and might for example deal with a controlled experiment to evaluate two different methods of teaching economics in 12th grade or two different types of materials. The student may pursue his interest in economic education in his required research courses, in content seminars, and in other education courses which allow him to select his own topic for individual study. If he has the equivalent of an undergraduate major in economics, he may take graduate courses from the Economics Department at the Graduate School of Arts and Science. As of this writing, about six students are pursuing their interest in economic education in the NYU School of Education's doctoral program.

In a similar type of program at the University of Minnesota, a Ph.D. candidate may major in either economics or education (business education or social studies) with reciprocal supporting fields. Almost all Ph.D. candidates in economic education have had a one or two year internship in the Center for Economic Education there. Although there is no formal masters program in economic education at Minnesota, eight economics courses and one education course are offered to in-service teachers --

all with graduate credit. Many have earned MS degrees in economics. Elsewhere in Minnesota, the centers for economic education at the College of St. Thomas in St. Paul and at the State College in St. Cloud offer masters programs in economic education for teachers.

Wright State University in Dayton, Ohio, offers three economics courses for teachers and a separate course in methods of teaching economics. The University of Illinois at Urbana has a masters program in economics for secondary teachers. The University of Colorado offers an academic year program for secondary teachers which enables them to focus heavily on economics. The University of Nebraska's Ph.D. program has provisions for work in economic education.

At the State University College of New York in Oneonta there is an M.S. in Economic Education which requires 18 hours of economics as a minimum. Among the education courses required is a six-credit seminar in economic education. The University of Missouri at Columbia offers an M.S. degree in economics for teachers which requires 30 hours of course work in subject matter. Elementary mathematics and statistics used in economics are included among the required courses.

Samford University in Birmingham, Alabama, has a masters program for teachers in which the student may take 15 hours of education and 15 of economics. At Oklahoma State University, teachers may select economic education as a major "area of emphasis" while earning an M.S. in business education or in social studies. The program requires 16 hours in economics beyond the principles course and 16 in education courses, research techniques, philosophy, and psychology. Purdue University in Indiana had a three-year funded Master of Arts in Teaching Economics program which

provided about 24 hours of economics and nine of education for the 75 persons who received that degree. The Master of Arts in Teaching Economics is still granted, but the program now has only about three persons enrolled. Clark University in Worcester, Massachusetts, has a TTT Program (Training Teacher Trainees) in which Ph.D. candidates in economics become involved, in addition to meeting the regular doctoral requirements, with educational issues and methods. Three TTT fellows are in the economics part of the program. (History and geography are also included in the TTT program.) The economist in the Clark program has a joint appointment in economics and education.

Probably the most ambitious graduate program in economic education is that currently in progress at Ohio University. A year-long Experienced Teacher Fellowship Program in Economic Education was conducted in 1969-1970 under USOE sponsorship. A primary ~~object~~ AIM of the Program was to provide leaders who would be prepared to become directors of centers or councils. Ohio actually has a Department of Economic Education in the College of Business Administration. An M.A. in Economic Education is offered, and a Ph.D. in Secondary Education with a Concentration in Economic Education is being offered in cooperation with the Department of Secondary Education.

Fellows in the Experienced Teacher Program were required to take at least 48 quarter hours in economics (minimum of 27), education, and economic education, but, in practice, most took more. (Previous economics was not required for admission to the Program.)

An outline of the M.A. curriculum follows:

Course Title	Course Description	Quarter Credits
	Summer Quarter	
Finance 551	Monetary Policy	3
Econ.Educ. 546	Economics in the Curriculum	3
Econ.Educ. 549	Economic Education Programs	3
Educ.SE 555	Adv. Principles of Teaching	3
	Inter-Quarter	
	Special Non-Credit Group Process Experience	
	Fall Quarter	
Educ.RS 521	Educational Statistics	4
Econ. 515	Economic History of the United States	4
Econ.Educ. 650	Economic Education Research	3
Econ.Educ. 690	Studies in Economic Education: Practicum	4
	Winter Quarter	
Econ. 503	Advanced Micro-Economic Theory	4
Econ. 575	Economics of Poverty	4
Econ.Educ. 651	Economic Education Seminar	3
Econ. Educ. 690	Studies in Economic Education: Practicum	4
	Spring Quarter	
Econ. 504	Advanced Micro-Economic Theory	4
Econ. 576	Economics of Human Resources	4
Econ.Educ. 691	Master's Seminar: Colloquium Paper	3
	Elective in Economics*	4

*In general, participants in the program will be encouraged to select from among the following courses:

Econ. 505	History of Economic Thought	4
Econ. 525	Comparative Economic Systems	4
Econ. 528	Regional Analysis	4
Econ. 535	Introduction to Econometrics	5
Econ. 563	Economics of Government	4
Fin. 655	Seminar in Monetary Theory	4

Doctoral candidates are expected to complete a minimum of 65 quarter credits in economics, education, and economic education. The Ph.D. degree is offered by the Department of Secondary Education, but in cooperation with the Department of Economic Education. All of the usual requirements for the doctorate must be met, and the candidate's advisor from the Department of Economic Education determines his specific economics and economic education requirements. An applicant for this degree must have an M.A. in economics or in education. Evaluations of the Ohio program are being made. Participants are being tested with the Test of Understanding in College Economics and a Test of Basic Economics developed by E.S. Wallace of the University of Nebraska. The possible effects of the program on attitudes toward economic issues are being assayed through the use of two instruments developed for that purpose. Changes in employment and job status for persons who complete the program will be examined. The participants will be asked to give their evaluations of the program, and an external evaluator will be called in to make a study of it.

Conclusion

To paraphrase the well-known commercial, "We've come a long way baby!." The programs described above, particularly the graduate programs in economic education, represent significant steps toward achievement of the goal of having teachers well-prepared in economics and in the teaching of it. Note, however, that in each instance the institution in question has a center or council on campus. (Prior to 1965 there was no center at NYU, but the Chairman of the Social Studies Department in the School of Education had a strong interest in economic education.) Note also, however, that only a fraction of the 81 colleges and universities which house

Centers or councils (or both) have such graduate programs. It can be inferred, then, that fewer than one percent of all colleges and universities which provide some sort of teacher training have strong economic education programs either at the undergraduate or graduate level.

What is the answer to the problem? Ideally, teacher-trainees should receive a good economics preparation as undergraduates. A few attempts are being made to provide this, such as the program at St. Cloud State College in Minnesota wherein the Economics Department has gone on record as being "thoroughly committed to the pursuit of economic education in all its various forms,"[11] and wherein there is encouragement for the undergraduate economics major to take a minor in education. Although the Center for Economic Education at St. Cloud is an autonomus unit, it is mentioned in the Economics section of the Bulletin along with information on education courses for B.A. candidates in economics who want an education minor. Unfortunately, few students have availed themselves of this opportunity. Even if every campus with a center or council establishes a similar program, only about 10 percent of the colleges with teacher training programs will be affected.

In-service programs will continue to be necessary, and will probably constitute the major opportunity for teachers to improve their knowledge of economics. If a teacher can be introduced to economics through a good course, workshop, or institute which shows him the importance of the subject and possibly how he can include it in his own classroom, a lasting interest might be developed. A few years ago a survey was made to over 5,000 teachers in Dade County, Florida, to ascertain their background and interest in economics. About 84 percent of those who had

had at least one course expressed at least some interest in the subject, as compared with only 66 percent of those who had never taken an economics course.[12] (One might argue that they were interested in economics before taking the course, but the data also suggest at least that their interest was not destroyed by the course.)

Because so little research and evaluation of a really rigorous sort has been done of in-service programs, we cannot say what kind of experience is most effective. It should be noted, however, that some centers and councils are developing programs which appear to be more innovative and exciting than those which have been typical in the past. A televised economics course in Arkansas was so interesting that many people other than educators became regular viewers.[13] There were sessions on the teaching of economics as well as on content. A series of films entitled "Economics for the Concerned Citizen" has been produced by the University of Nebraska in conjunction with the Nebraska Council on Economic Education.[14] The 12 lessons are conducted by James B. Calderwood. Although methods of teaching of economics are not included, one could use the films to provide the in-service teacher with content and employ an educator to follow-up with lessons on how to teach it. Hugh Lovell of the Center the Center for Economic Education and Oregon Council on Economic Education at Portland State University has developed a 21-hour "Package Economics Course" which, in addition to the subject matter of economics, includes specific techniques for teaching economics in the classroom. This is a unique guide for professors who are training elementary teachers in Oregon. Lists of sources and questions for quiz are also included. Participants are shown how to use Oregon's Teachers Guides to Economics in Grades I through 8, and the Oregon Council promises to match every dollar spent

by a school district, as well as providing materials, films, discussion leaders, and other resources.[15] Package courses and arrangements such as these could do much to solve the problems many centers, councils, and school districts have in getting competent instructors and adequate materials for good in-service courses.

Finally, the graduate programs described earlier also represent a promising means of advancing the economic literacy of teachers. It is imperative that the barriers that too often separate the departments of economics and education be broken down, and it is the duty of centers and councils to achieve this. It is also important that every economics program for teacher-trainees or teachers in-service include evaluation and, if possible, experimental research. Because of the obvious limitations of our resources, we must know which programs and techniques are most effective not only in terms of increasing the economic understanding of the participating pre-service or in-service teachers but in terms of their ultimate impact in the classroom. In the 21 years in which there has been a formal economic education movement in the United States we have made great progress; but in terms of the magnitude of the problem that exists -- the problem of promoting economic literacy -- it is but a humble beginning.

* * * *

Notes:

1. Luther H. Hodges, "We're Flunking Our Economic ABC's," The Saturday Evening Post, March 10, 1962.
2. "Continuing Study Shows H.S. Seniors Flunk Simple Economics Test," Consumer Finance News, November 1970.
3. Economic Education in the Schools. (New York: Committee for Economic Development, 1961, p. 7)
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